

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1 – 33. (Canceled).

34. (New) A method for producing a fibrous web, in particular a paper or board web, for at least one fibrous suspension having a fibrous suspension density (FSD) in a production machine having at least one circulating wire and a headbox, said method comprising:

applying the at least one fibrous suspension with a fibrous suspension height (FSH) from the headbox onto the at least one circulating wire;

guiding the at least one circulating wire and fibrous suspension over a series of dewatering elements;

measuring at least one of the fibrous suspension height (FSH) and the fibrous suspension density (FSD) with at least one measuring cell fitted in a stationary manner so as to not directly contact the fibrous suspension;

evaluating an obtained measured value in an associated process control system of the machine;

determining whether the obtained measured value violates a predefined limit; and
automatically activating or influencing, via the process control system, at least one actuating element to at least one of signal a violation of a predefined limit and initiate at least one appropriate countermeasure to counteract a further increase or reduction in at least one of the fibrous suspension height (FSH) and the fibrous suspension density (FSD) in a monitored region.

35. (New) The method in accordance with claim 34, wherein the obtained measured value is compared to at least two predefinable limiting values, composed of an upper limiting value and a lower limiting value.

36. (New) The method in accordance with claim 34, wherein the at least one measuring cell is stationarily mounted at least one of: close to a surface in the headbox; in

a dewatering element; and in a framing of the machine.

37. (New) The method in accordance with claim 34, further comprising measuring at least one of the fibrous suspension height (FSH) and the fibrous suspension density (FSD), viewed at right angles to a machine running direction, at a plurality of points at a respective distance from one another by a plurality of measuring cells mounted in a stationary manner.

38. (New) The method in accordance with claim 37, wherein a the distance between the measuring points is in a range of 50 mm to 1000 mm.

39. (New) The method in accordance with claim 38, wherein the distance between the measuring points is in a range of 100 mm to 500 mm.

40. (New) The method in accordance with claim 34, wherein the measuring is part of a control system composed of signal conversion, which is arranged to follow the measuring and data processing in the process control system.

41. (New) The method in accordance with claim 34, wherein, when a relevant predefined limit violated, the method further comprises at least one of:

- a) reducing or increasing a wire speed of the machine;
- b) reducing or increasing dewatering performance in a machine running direction upstream of the measuring cell;
- c) reducing or increasing the fibrous suspension density (FSD) of the supplied fibrous suspension; and
- d) reducing or increasing a quantity of fibrous suspension applied to the circulating wire.

42. (New) The method in accordance with claim 41, wherein at least one drive of the machine is influenced to change the wire speed.

43. (New) The method in accordance with claim 41, wherein at least one of: a quantity of dilution water supplied to the fibrous suspension; a level of vacuum on at least one of the dewatering elements and/or a forming roll; a metering of chemicals; a wire tension on the former is influenced to change the fibrous suspension density (FSD).

44. (New) The method in accordance with claim 43, wherein the chemicals include a retention aid, and the former comprises a gap former.

45. (New) The method in accordance with claim 41, wherein at least one

headbox pump of the headbox is influenced to change a quantity of fibrous suspension applied to the circulating wire.

46. (New) The method in accordance with claim 34, wherein an alarm signal is generated when a relevant limiting value is violated.

47. (New) The method in accordance with claim 34, wherein the predefined limit comprises a first limiting value and a further limiting value, and the method further comprises generating a warning signal when the first limiting value is violated; and initiating at least one countermeasure when the further limiting value is violated.

48. (New) The method in accordance with claim 34, wherein the headbox comprises at least one headbox slice, a dividing element and a slat.

49. (New) The method in accordance with claim 34, wherein the dewatering element comprises at least one forming roll, a forming foil, a skimmer strip, a supporting strip, a sealing strip, a dewatering box, and a foil box.

50. (New) A system for monitoring at least one fibrous suspension during the production of a fibrous web, in particular a paper or board web, in a production machine, the at least one fibrous suspension having a fibrous suspension density (FSD) and a fibrous suspension height (FSH), said system comprising:

at least one circulating wire;

at least one headbox arranged to apply the fibrous suspension to said at least one circulating wire;

a plurality of dewatering elements, said at least one circulating wire being arranged to be guided over said plurality of dewatering elements with the at least one fibrous suspension;

at least one measuring cell fitted in a stationary manner so as not to directly contact the fibrous suspension, said at least one measuring cell being structured and arranged to measure at least one of the fibrous suspension height (FSH) and the fibrous suspension density (FSD);

a process control system, coupled to said at least one measuring cell, being structured and arranged to evaluate whether a measured value from said at least one measuring cell violates a predefined limit;

at least one actuating element, coupled to be automatically activated or influence by

said process control system, being structured and arranged to at least one of signal a violation of a predefined limit and initiate at least one appropriate countermeasure to counteract a further increase or reduction in at least one of the fibrous suspension height (FSH) and the fibrous suspension density (FSD) in a monitored region.

51. (New) The monitoring system in accordance with claim 50, wherein the measured value is compared with at least two predefinable limiting values composed of an upper limiting value and lower limiting value.

52. (New) The monitoring system in accordance with claim 50, wherein said at least one measuring cell is stationarily mounted at least one of close to the surface for measuring the fibrous suspension height (FSH) and/or the fibrous suspension density (FSD) in the headbox; in at least one of said plurality of dewatering elements; and in a framing of the production machine.

53. (New) The monitoring system in accordance with claim 52, wherein said at least one measuring cell is embedded in a component surrounding it.

54. (New) The monitoring system in accordance with claim 52, wherein said at least one measuring cell is fitted into a hollow space.

55. (New) The monitoring system in accordance with claim 52, wherein said at least one measuring cell, at least with respect to the side of the wire, is enclosed.

56. (New) The monitoring system in accordance with claim 52, wherein said at least one measuring cell forms part of a surface of at least one of said dewatering elements.

57. (New) The monitoring system in accordance with claim 50, wherein said at least one measuring cell comprises a plurality of measuring cells that are stationarily mounted and located at a plurality of points a respective distance from each other, said plurality of measuring cells being structured and arranged to measure at least one of the fibrous suspension height (FSH) and the fibrous suspension density (FSD), viewed at right angles to a machine running direction.

58. (New) The monitoring system in accordance with claim 57, wherein the respective distance between the measuring points is in a range of 50 mm to 1000 mm.

59. (New) The monitoring system in accordance with claim 58, wherein the respective distance between measuring points is in a range of 100 mm to 500 mm.

60. (New) The monitoring system in accordance with claim 57, wherein said plurality of measuring cells are connected to one another via appropriate lines and are supplied to a common signal converter.

61. (New) The monitoring system in accordance with claim 60, wherein a transmission of measured values to said a preferably common signal converter is carried out by a radio transmission.

62. (New) The monitoring system in accordance with claim 50, wherein said at least one measuring cell comprises at least one of a radioactive source, a laser unit, and an ultrasound unit.

63. (New) The monitoring system in accordance with claim 62, wherein said radioactive source comprises a Gamma gage.

64. (New) The monitoring system in accordance with claim 50, further comprising a control system, of which the measurement by said at least one measuring cell is a part, said control system comprising a signal conversion arranged to following the measurement and data processing in said process control system.

65. (New) The monitoring system in accordance with claim 50, wherein said process control system is structured and arranged such that, when the predefined limit is violated, at least one of the following countermeasures is initiated:

- a) a reduction or increase in a wire speed of the production machine;
- b) a reduction or increase in dewatering performance in a machine running direction upstream of said at least one measuring cell;
- c) a reduction or increase in the fibrous suspension density (FSD) of the fibrous suspension; and
- d) a reduction or increase in the quantity of fibrous suspension applied to the circulating wire.

66. (New) The monitoring system in accordance with claim 65, wherein at least one drive of the production machine is influenced to change the wire speed,

67. (New) The monitoring system in accordance with claim 65, further comprising an adjustment device to change the fibrous suspension density (FSD) structured and arranged to adjust at least one of: a quantity of dilution water supplied to the fibrous suspension; a level of vacuum on at least one of the dewatering elements and/or a forming

roll; a metering of chemicals; a wire tension on the former.

68. (New) The method in accordance with claim 67, wherein the chemicals include a retention aid, and the former comprises a gap former.

69. (New) The method in accordance with claim 65, wherein said headbox comprises at least one headbox pump, and said at least one headbox pump influences is structured and arranged to a change in a quantity of fibrous suspension applied to the circulating wire.

70. (New) The monitoring system in accordance with claim 50, further comprising an alarm structured and arranged to generate an alarm signal when the predefined limit is violated.

71. (New) The monitoring system in accordance with claim 70, wherein the predefined limit comprises a first limiting value and a further limiting value, and when the first limiting value can be violated, the alarm signal is generated, and when the further limiting value is violated, at least one appropriate countermeasure is initiated.

72. (New) The monitoring system in accordance with claim 50, wherein said headbox comprises at least one headbox slice, a dividing element and a slat.

73. (New) The monitoring system in accordance with claim 50, wherein said at least one dewatering element comprises at least one forming roll, a forming foil, a skimmer strip, a supporting strip, a sealing strip, a dewatering box, and a foil box.